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EPIDEMIOLOGY OF GONORRHOEA*

CERTAIN ASPECTS OF CONTROL OF THE DISEASE IN WOMEN WITH PARTICULAR REFERENCE TO CONTACT TRACING

BY

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When Dr. Morton invited me to take part in this discussion he said that this was an opportunity "to ride pet hobby horses"—and this is what I propose to do. I intend to consider certain aspects of the control of the disease in women with particular reference to contact tracing.

The basic problem is that gonorrhoea is essentially a clinically latent infection in the adult woman so that a reservoir of undiagnosed disease persists in women. Most infected men have symptoms and attend promptly; most infected women do not.

Table I shows the reasons for attendance of 100 women found to have gonorrhoea (Dunlop, 1961). Only 22 of them came because of symptoms, and no less than 69 came because the sexual contact had urethral discharge. It is clear that, at the present time, the detection of gonorrhoea in women depends greatly upon the co-operation of male contacts and I propose to consider the results obtained by this present system.

TABLE I

REASON FOR ATTENDANCE OF 100 WOMEN WITH GONORRHOEA*

Reason	No. of Cases
Contact has urethral discharge	69
Contact unfaithful	5
Routine tests (Remand Home)	4
Symptoms	22
Total	100

* Whitechapel Clinic, 1960

First, however, let us consider the question of symptoms a little further. Table II shows that, although only 22 women presented because of symptoms, direct questioning elicited that 70 per cent. had some symptoms which were usually slight. *T. vaginalis* was present in the vaginal secretions of 27 of these seventy patients with symptoms; it was found in 24 of the 61 with vaginal discharge, eleven of the twenty with dysuria and increased frequency, and thirteen of the seventeen with abdominal pain, and was also present in ten of the thirty patients who had no symptoms. It is clear that the presence of trichomoniasis, which is a sexually-transmitted infestation, indicates the necessity for the exclusion of other sexually-transmitted disease.

TABLE II

SYMPTOMS OF GONORRHOEA IN 100 WOMEN*

Symptoms	Cases	*T. vaginalis* present
Vaginal discharge	61	24
Dysuria	18	11
Increased frequency	2	
Abdominal pain (Salpingitis in six)	17	13
Vulval soreness, irritation	12	5
"Boils" (Bartholinitis)	3	1
Rectal soreness, irritation	3	—
Menstrual abnormalities	5	4
Patients with symptoms	70	27
Patients without symptoms	30	10
Total	100	37

* Whitechapel Clinic, 1960.

Only 22 of the patients presented because of symptoms, but the development of symptoms, even when marked, did not always lead to investigation for gonorrhoea, as is shown by Table III.

TABLE III

TREATMENT BEFORE DIAGNOSIS IN 100 WOMEN WITH GONORRHOEA*

Treatment	Patients
Pessaries	4 (2 pregnant)
Sulphonamide tablets	1
Cauterization of cervix	1
Total	6

* Whitechapel Clinic, 1960.

* Paper read to the M.S.S.V.D. on November 30, 1962.

Four patients had already received pessaries for vaginal discharge before attending for tests; two of these were pregnant and had been told that the discharge was due to pregnancy. One had received sulphonamide tablets for "cystitis". One had had the cervix cauterized for cervical discharge.

The contact slip is our main method of bringing infected women to notice. In considering its effectiveness it is instructive to divide the contacts of a man with gonorrhoea into the infecting or "reservoir" contact (*i.e.* the source of infection) and the "secondary" contacts to whom he may have transmitted the disease.

Table IV shows the results of contact tracing in 100 unselected fresh cases of gonorrhoea in 96 men. Six of 100 theoretically possible "reservoir" contacts were examined and eighteen of 22 "secondary" contacts. It is of interest that in only one case, that of a British seamen, was the "reservoir" contact said to be abroad. In all the other cases the disease had been acquired in England. The 6 per cent. of "reservoir" contacts who attended is small compared with the 82 per cent. of "secondary" contacts who attended. Of the 22 known "secondary" contacts only four did not attend; one of these was the wife of one of the patients and the other three were casual contacts who had been exposed to infection immediately before the infected males attended at the hospital. Of the six "reservoir" contacts who were traced three were "regular girl friends" (in fact, at least one of these was a prostitute) and three were casual contacts. Of the eighteen "secondary" contacts who attended, ten were wives, one a fiancée, and the remaining seven were "friends". It is clear that the contact slip is an ineffective method for tapping the "reservoir" of gonococcal infection.

Table V shows that, as might be expected, six of the six "reservoir" patients had gonorrhoea or presumed gonorrhoea, but four of the eighteen patients secondarily exposed to gonorrhoea were found to be free from that infection.

Table VI shows the nationality of the 100 cases of gonorrhoea in men and of the 24 female contacts; 58 of the men were coloured. Fifteen contacts who attended as a result of the 52 cases in male Caribbeans included ten Caribbean women, three British,

TABLE IV

CONTACT TRACING IN 100 CASES OF GONORRHOEA IN MEN*

Type of Contact	No. of Contacts	No. of Contacts who Attended Hospital			
		Homerton Grove	Elsewhere	Total	
				No.	Per cent.
"Reservoir"	100†	4	2	6	6
"Secondary"	22	15	3	18	82

* Homerton Grove Clinics, 1962.
† Contact slip offered to all patients.

TABLE V

DIAGNOSIS OF 24 FEMALE CONTACTS OF 100 CASES OF GONORRHOEA IN MEN*

Type of Contact	Gonorrhoea	Gonorrhoea with Trichomoniasis	Gonorrhoea with Moniliasis	At Other Hospitals		Moniliasis with Trichomoniasis	Moniliasis with Syphilis	No Infection	Total	Proportion Attending
				?Gonorrhoea	?Gonorrhoea ?Salpingitis					
"Reservoir"	2	1	1	—	2	—	—	—	6	6/100
"Secondary"	6	2	3	2	1	1	1	2	18	18/22
Total ..	8	3	4	2	3	1	1	2	24	—

"Reservoir"=Gonorrhoea (or presumed gonorrhoea) in 6/6 attending hospital
"Secondary"=Gonorrhoea (or presumed gonorrhoea) in 14/18 attending hospital.
* Homerton Grove Clinics, 1962.

TABLE VI

NATIONALITY OF 100 CASES OF GONORRHOEA IN MEN AND 24 OF THEIR FEMALE CONTACTS*

Males		No. and Nationality of Female Contacts					
Nationality	No. of Cases	Caribbean	British	Irish	Greek	Not Known	Total
Coloured (Caribbean)	52	10	3	0	0	2	15
Coloured (Others)	6	0	0	0	0	0	0
British	29	1	2	1	1	2	7
Cypriot	8	0	1	0	0	0	1
Maltese	2	0	0	0	0	0	0
Yugoslavian	1	0	0	0	0	0	0
Gibraltarian	1	0	0	0	0	0	0
Irish	1	0	0	1	0	0	1
Total	100	11	6	2	1	4	24

* Homerton Grove Clinics, 1962,

and two of unknown nationality. Seven contacts of the 29 British males with gonorrhoea were examined and one of these was a Caribbean woman. In all, eleven of the 24 female contacts attending hospital were Caribbeans.

Table VII shows how 100 unselected women found to have gonorrhoea had been referred to the clinic: 68 came because of an infected contact, 27 because of the husband, forty because of a "boy friend", and only one because of a *casual* contact. Eighteen women came of their own accord because of a possible risk and fourteen came from other doctors.

TABLE VII

METHOD OF REFERRAL OF 100 WOMEN WITH GONORRHOEA*

How Referred		Number of Women
Through Contact	Husband .. 27 .. .. "Boy Friend" 40 .. .. Casual .. 1	68
Attended of Own Accord (Risk of infection, etc.) ..		18
Through Medical Advice	Family Doctor 10 .. .. Hospital/Clinic 4	14
Total		100

* Homerton Grove Clinics, 1961-62.

Failure to tap the "reservoir" of gonorrhoea, which is constituted by infected women with few or no symptoms, is the main reason for failure to control spread of the disease. The paramount need is to improve methods of reaching these infected contacts. The following appear to be possible methods of approach:

(1) Further persuasion of the male contact;

(2) Encouraging co-operation by general practitioners and the staff of other hospital departments;

(3) Direct advertisement to the public.

It seems unlikely that much more is to be hoped from the further persuasion of infected patients by the use of contact slips alone. By this means it is the "secondary" case which is found. Detailed histories taken by experienced social workers, followed by visits whenever sufficient information is obtained, however, might well bring more "reservoir" cases to light.

From other doctors who co-operate, only the minority of infected patients who show significant symptoms is likely to be sent for diagnosis; this amounts to only 22 per cent. of the selected group in this series who attended hospital, and possibly to a far smaller proportion of infected women as a whole.

There is need to widen the indications for attendance for investigation at a clinic. The main indication should be that of having incurred a possible risk of sexually-transmitted infection, and this point should be stressed in propaganda on the subject. In requesting the co-operation of other doctors in case-finding we should stress that the presence of one sexually-transmitted disease, such as trichomoniasis, should be regarded as necessitating tests to exclude the other sexually-transmitted diseases.

One method of direct approach to the public would be by leaflets and pamphlets which the Ministry of Health might supply free to family doctors for their waiting rooms. This was suggested at a recent meeting of a small group of general practitioners which discussed the pamphlet entitled "The Venereal Disease Service" recently issued by the Ministry of Health (1962). It was felt that, because exposure to infection was the indication for examination, the "V.D. Clinic" should alter its "image", in the eyes of public and doctor, to that of a centre dealing with genital disorders and discharges and all sexually-transmitted infections. If the clinic is labelled as a department for "venereal diseases", this is tantamount to placing the burden of diagnosing venereal disease upon the practitioner or specialist who refers the patient, and upon the symptom-free patient herself, before she even comes to the clinic.

In the past the London Lock Hospital used to advertise its services direct to the public once a week in the evening papers—and many people used to attend because of the advertisements.

The time has come for a direct approach to the public and for the use of all available methods and media, not just occasionally but as a part of a continuous educational programme.

Summary

A "reservoir" of gonorrhoea persists in infected women because the disease is characteristically latent in most of them. Most infected men attend promptly but most infected women do not; 69 of 100 women found to have gonorrhoea attended because their consorts were suffering from urethral discharge and only 22 came because of symptoms. Trichomoniasis was also present in 37 of these 100 women. The presence of this sexually-transmitted infestation indicates the necessity for the exclusion of other sexually-transmitted diseases.

The effectiveness of contact-tracing by the use of contact slips was studied in 100 cases of gonorrhoea in men, in all but one of which the infection had been acquired in England; 58 cases occurred in

coloured patients, and fifteen female contacts, of whom ten were Caribbeans, attended because of the 52 cases in male Caribbean patients. Seven female contacts of the 29 British males attended, of whom one was a Caribbean. In all, 24 female contacts attended, of whom eleven were Caribbeans.

The female contacts of each man with gonorrhoea were divided into the "reservoir" contact, that is to say the presumed source of infection, and the "secondary" contacts to whom the infection might have been transmitted. Only six of the 100 "reservoir" contacts were examined compared with eighteen of the 22 "secondary" contacts. Clearly the contact slip is an inefficient method for tapping the "reservoir" of gonorrhoea and reliance on this method is one of the main reasons for failure of control of the disease.

Study of the method of referral of 100 women patients with gonorrhoea showed that only fourteen came from other doctors and that only eighteen came of their own accord because of a possible risk of infection, that 67 came because of a husband or friend and only one because of a casual contact.

Further efforts to reach the "reservoir" of infectious gonorrhoea should be made by means of social workers and direct advertisement to the public.

The main indication for attendance at a clinic should be that of having run a possible risk of sexually-transmitted infection. The "V.D. Clinic" should no longer be so labelled; it should alter its "image", in the eyes of public and doctor, to that of a centre dealing with genital disorders and discharges and all the sexually-transmitted infections.

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Epidémiologie de la blennorragie

RÉSUMÉ

Il persiste un réservoir d'infection parmi les femmes atteintes de blennorragie parce que chez elles cette maladie est presque toujours asymptomatique. La plupart des hommes viennent tout de suite à la clinique, mais les femmes ne viennent pas. Sur ceut femmes atteints, 69 sont venues à la clinique à cause d'une émission urétrale chez leur partenaire sexuel et 22 seulement sont venues à cause de leurs propres symptômes. On trouva également la trichomoniase chez 37 de ces ceut femmes, ce qui indique la nécessité de recherches en même temps d'autres infections vénériennes.

On étudie l'emploi du "contact slip"* chez 100 hommes atteints de blennorragie, tous sauf un ayant été infectés au Royaume-Uni; 58 d'entre eux n'étaient pas blancs, et 15 femmes (10 caraïbes) sont venues de la part de 52 hommes caraïbes, 8 femmes (une caraïbe) sont venues de la part de 29 hommes anglais.

Les partenaires sexuelles des hommes atteints de blennorragie se divisent en deux groupes: celle du "réservoir" (la source de l'infection) et les cas "secondaires" (auxquelles l'infection a été transmise). Seulement 6 sur 100 femmes du "reservoir" furent examinées, mais 18 sur 22 cas secondaires sont venues à la clinique. Le "contact slip" est donc inéfficace comme moyen de découvrir l'origine d'infection chez les femmes infectées, et il semble que l'échec actuel du contrôle de la blennorraigie soit dû à notre confiance en cette méthode.

14 seulement sur 100 femmes traitées furent envoyées à la clinique par leurs propres médecins, 18 sont venues elle-mêmes par peur d'injection, 67 selon le conseil de leurs partenaires sexuels réguliers, et une après avoir en des relations sexuelles fortuites.

Il faut essayer d'atteindre ce réservoir d'infection par l'entremise des assistantes sociales et par l'éducation directe du public.

La raison principale de se faire examiner doit être le risque de contagion sexuelle.

La clinique "anti-vénérienne' doit prendre un autre nom; elle doit changer son image, aux yeux du public et du médecin, et se faire regarder comme centre de guérison de toutes les maladies génitales, toutes les émissions urétrales, et toutes les infections traumises au cours des relations sexuelles.

* Fiche donnée au malade sur laquelle il peut inscrire le nom et l'adresse de sa partenaire sexuelle, pour qu'elle vienne se faire examiner.